

Notice of Allowability

Application No.

09/803,838

Examiner

Paulos M. Natnael

Applicant(s)

SHIRATA ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/31/05.
2. ☒ The allowed claim(s) is/are 4-6,8,11,13,15,19 and 21-26.
3. ☒ The drawings filed on 12 March 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Allowable Subject Matter

1. Claims **4-6,8,11,13,15,19,21-26** are allowable over the prior art.
2. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to disclose, a video processing method comprising: dividing an input data region representative of a range of digital luminance data into a plurality of regions comprising substantially all of said input data region, selecting one of a plurality of output data correction characteristics, each of said plurality of output data correction characteristics being non-linear as a whole, but comprising a linear portion coextensive with each of said plurality of regions and having different slopes in at least two of said regions, wherein one of said output data characteristic is an S-shaped characteristic 'which is nonlinear and continuous as a whole and consists of linear portions in said first and third regions where the gain is smaller than one, and a linear portion in said second region where the gain is greater than one; wherein at least one of said output data characteristic is a trapezoidal characteristic which is nonlinear and continuous as a whole and consists of a linear portion in said first region where the gain is greater than one, a linear portion in said second region where the gain is equal to one exactly or approximately, and a linear portion in said third region where the gain is smaller than one, correcting digital luminance data in accordance with the selected characteristic, wherein said plurality of output data correction characteristics are selected based on an identification information inserted in said video signal to identify said image, as in claim 4;

a video processing method comprising the steps of dividing an input data region representative of a range of digital color difference data into plurality of regions comprising substantially all of said input data region, selecting one of a plurality of output data correction characteristics, each of said plurality of output data correction characteristics being non-linear as a whole, but comprising a linear portion coextensive with each of said plurality of regions and having different slopes in at least two of said regions; wherein at least one of said output data characteristic is a trapezoidal characteristic which is nonlinear and continuous as a whole and consists of a linear portion in first region where the gain is greater than one, a linear portion in second region where the gain is equal to one exactly or approximately, and a linear portion in said third region where the gain is smaller than one, and one of said plurality of output data correction characteristics is an S-shaped characteristic which is nonlinear and continuous as a whole and consists of linear portions in said first and third regions where the gain is smaller than one, and a linear portion in said second region where the gain is greater than one; correcting the digital luminance data in accordance with the selected characteristic; executing gain control or hue control with regard to digital color difference data or other digital color data, wherein said plurality of output data correction characteristics are selected based on an identification information inserted in said video signal to identify said image, as in claim 5;

a video processing method comprising the steps of: dividing an input data region representative of a range of digital color difference data into plurality of regions comprising substantially all of said input data region, separating luminance data and

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color difference data from digital video data which are composed of the luminance data and the color difference data combined to be multiplexed, selecting one of a plurality of output data correction characteristics, each of said plurality of output data correction characteristics being non-linear as a whole, but comprising a linear portion coextensive with each of said plurality of regions and having different slopes in at least two of said regions, wherein at least one of said output data characteristic is trapezoidal characteristic which is nonlinear and continuous as a whole and consists of a linear portion in said first region where the gain is greater than one, a linear portion in said second region where the gain is equal to one exactly or approximately, and a linear portion in said third region where the gain is smaller than one, and one of said plurality of output data correction characteristics is S-shaped characteristic which is nonlinear and continuous as a whole and consists of linear portions in said first and third regions where the gain is smaller than one, and a linear portion in said second region where the gain is greater than one; correcting the separated luminance data in accordance with the selected output data correction characteristic, executing gain control or hue control with regard to the separated color difference data, wherein said plurality of output data correction characteristics are selected based on an identification information inserted in said video signal to identify said image, as in claim 6;

A video processing device comprising: a data separator circuit for separating luminance data and color difference data from digital video data which are composed of the luminance data and the color difference data to be multiplexed, a luminance

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corrector circuit for correcting the luminance data separated by said data separator circuit, wherein one of said plurality of output data correction characteristics is a trapezoidal characteristic which is nonlinear and continuous as a whole and consists of a linear portion in said first region, where the gain is greater than one, a linear portion in said second region where the gain is equal to one exactly or approximately, and a linear portion in said third region where the gain is smaller than one, one of said plurality of output data correction characteristics is a S-shaped characteristic which is nonlinear and continuous as a whole and consists of linear portions in said first and third regions where the gain is smaller than one, and a linear portion in said second region where the gain is greater than one, a correcting digital luminance data corresponding to said video signal included in said plurality of regions in accordance with said selected output data correction characteristic, wherein said plurality of output data correction characteristics are selected based on an identification information inserted in said video signal to identify said image, as in claim 11;

a data separator circuit for separating luminance data and color difference data from digital video data which are composed of the luminance data and the color difference data to be multiplexed; a luminance corrector circuit for correcting the luminance data separated by said data separator circuit, wherein one of said plurality of output data correction characteristics is a trapezoidal characteristic which is nonlinear and continuous as a whole and consists of a linear portion in said first region where the gain is greater than one, a linear portion in said second region where the gain is equal to one exactly or approximately, and a linear portion in said third region where the gain

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is smaller than one and one of said plurality of output data correction characteristics is a S-shaped characteristic which is nonlinear and continuous as a whole and consists of linear portions in said first and third regions where the gain is smaller than one, and a linear portion in said second region where the gain is greater than one, a correcting digital luminance data corresponding to said video signal included in said plurality of regions in accordance with said selected output data correction characteristic, wherein said plurality of output data correction characteristics are selected based on an identification information inserted in said video signal to identify said image, as in claims 13 and 19;

a data separator circuit for separating luminance data and color difference data from digital video data which are composed of the luminance data and the color difference data to be multiplexed; a luminance corrector circuit for correcting the luminance data separated by said data separator circuit, wherein one of said plurality of output data correction characteristics is a the trapezoidal characteristic which is nonlinear and continuous as a whole and consists of a linear portion in said first region where the gain is greater than one, a linear portion in said second region where the gain is equal to one exactly or approximately, and a linear portion in said third region where the gain is smaller than one, and one of said plurality of output data correction characteristics is a S-shaped characteristic which is nonlinear and continuous as a whole and consists of linear portions in said first and third regions where the gain is smaller than one, and a linear portion in said second region where the gain is greater than one; and a control processing circuit for executing gain control or hue control with

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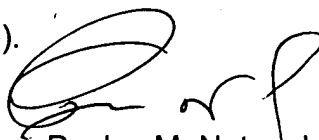
regard to the color difference data separated by said data separator circuit, a correcting digital luminance data corresponding to said video signal included in said plurality of regions in accordance with said selected output data correction characteristic wherein said plurality of output data correction characteristics are selected based on an identification information inserted in said video signal to identify said image, as in claim **21**;

a controller for writing a control state relative to video data as a control parameter in said memory correspondingly to video identification information which specifies the video, or to characteristic descriptive information which describes the image characteristic, wherein, when the video data are to be outputted, said controller reads out the control parameter from said memory if the video identification information or the characteristic descriptive information relative to the output video data is stored in said memory and also if the control parameter corresponding to such information is stored therein, and said controller sets the control state for the output video data in accordance with the control parameter thus read out, as in claims **22, 23 and 25**.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (571) 272-7354. The examiner can normally be reached on 10:00am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571)272-7353. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paulos M. Natnael
Primary Examiner
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July 19, 2005